

A METHOD OF SENSING TEMPERATURE OF A DIGITAL X- RAY IMAGING SYSTEM

Abstract of Disclosure

An X-ray imaging system that utilizes the leakage, or dark current, of a detector panel's photodiodes to provide more accurate data about the temperature and spatial distribution of temperature of the X-ray detector panel. Offset images are taken at known temperatures and recorded for each photodiode at two or more known temperatures. A temperature versus offset image value curve is created for each photodiode. A second offset image value is determined immediately prior to or immediately after X-ray acquisition to determine the temperature of the detector panel at the time of X-ray acquisition. A coupled closed-loop cooling system utilizes the determined temperature to maintain the detector panel within a preferred temperature range.

Figures